

### **REMARKS**

The Applicants appreciate the Examiner's thorough examination of the subject application and the indication that claims 4, 13, 14, if rewritten in independent form, would be in a condition for allowance. Applicants further request reconsideration of the subject application based on the instant amendments and following remarks.

Claim 3 has been amended. Claims 1, 3-17, 24—26, 30, and 35 are pending and claims 18-22, 39-64, and 67 are currently withdrawn. Claim 27 has been cancelled by the instant amendment without prejudice or disclaimer. Support for the instant amendments can be found in claims 1 and 3 as originally filed and throughout the specification. No new matter has been added by the claim amendments.

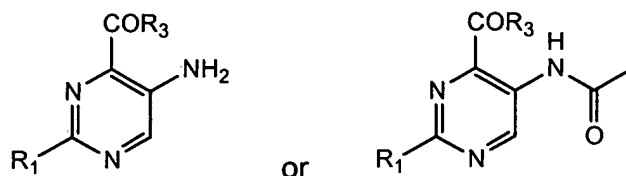
Claims 27 stands rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 has been cancelled by the instant submission. Applicants reserve the right to substantively address the §112, second paragraph rejection of claim 27 upon representment of the claim in a continuation application.

Claims 1, 24-26, 30 and 35 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Kim, et al. (U.S. Patent 3,517,007). The rejection is traversed.

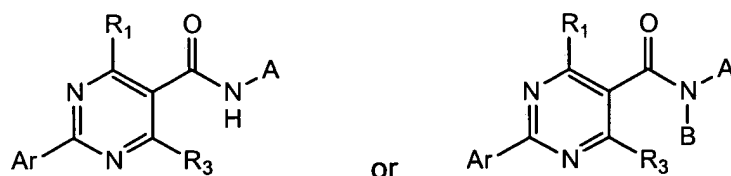
The compounds recited in Kim do not anticipate the compounds provided by claim 1 of the instant application.

As the reference is understood, each of the compounds recited by Kim have a 5-amino-pyrimidine or a 5-acetamido-pyrimidine core structure. Thus, the compounds of Kim satisfy one of the following two structures.



In contrast, the compounds of claim 1 have a R<sub>2</sub> substituent selected from the group consisting of alkenyl, alkynyl, aminoalkyl, mono or dialkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, or mono or dialkylcarboxamide.

Compounds of claim 1 having a R<sub>2</sub> substituent selected to be a monoalkylcarboxamide or a dialkylcarboxamide have the structures as follows:



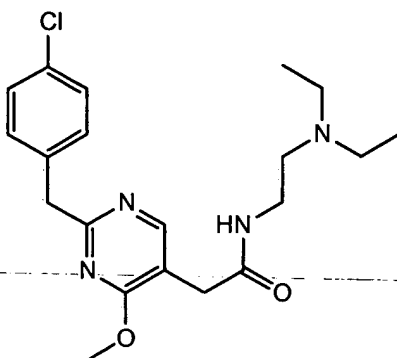
wherein A and B are alkyl residues.

Thus, claim 1, as amended, is patentable over Kim. Claims 24-26, 30, and 35 depend from claim 1, and are therefore also patentable over Kim. Applicants respectfully request withdrawal of the rejection and reconsideration of the claims.

Claims 3, 5-8, 9-12 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Hepworth (U.S. Patent 3,592,895).

The rejection is traversed.

As the reference is understood, Hepworth discloses 4,5-disubstituted-2-benzyl pyrimidine compounds in which the 2-benzyl residue has a *para*-chloro substituent, the 4-substituent is a methoxy residue, and the 5-substituent is a N-substituted acetamide. Thus, Example 32 of Hepworth teaches a compound of the formula:



N-(2-diethylaminoethyl)-(2-p-chlorobenzyl-6-methoxypyrimid-5-yl)acetamide

More particularly the compound identified in the office action has a substituted alkyl residue at the 5-position of the pyrimidine ring, e.g., a methyl residue substituted with  $-C(O)NH(CH_2)_2NEt_2$ , and a benzyl residue at the 2 position of the pyrimidine ring.

In contrast, the compounds of claim 3, as currently presented, comprise (1) an aromatic substituent directly attached to the pyrimidine ring at the 2 position (variable Ar) and (2) an  $R_2$  residue having an oxygen atom, sulfur atom, nitrogen atom, or carbonyl residue alpha to the pyrimidine ring.

The compounds provided by claim 3 do not encompass either of the above identified structural elements of Hepworth. Moreover, one of ordinary skill in the art would not have had motivation or a reasonable expectation of obtaining a desirable therapeutic effect by making the substantial modifications necessary to arrive at the compounds of claim 3 based on the compound recited in Hepworth.

One of ordinary skill in the art would not be motivated from the Hepworth disclosure to make pyrimidine compounds which do not comprise the essential 2-benzyl group or the  $\beta$ -acetamide or  $\beta$ -acetyl residues at the 5 position of the pyrimidine ring disclosed therein. Thus, the instantly claimed invention would not have been obvious from Hepworth.

For instance, it is well-known that to establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143.

There is no suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the cited reference to make the claimed invention, nor is there a reasonable expectation of success.

Thus, claim 3, as amended, are patentable over Hepworth. Claim 5-8, and 9-12 depend from claim 3, and are therefore also patentable over Hepworth. Applicants respectfully request withdrawal of the rejections and reconsideration of the claims.

Applicants respectfully request rejoinder of Group 7 as that group was originally defined in the November 5, 2003 Office Action with revised Group I. Applicants assert that multiple groups could be searched and examined together without undue burden. For instance, Groups 1 and 7 share a common classification (514 and 544), and said groups are drawn to claims which recite pyrimidine compounds having: (1) Ar selected from phenyl or naphthyl; (2) R<sub>2</sub> is selected from various groups including mono and disubstituted amino groups and alkoxy groups which do not comprise a heteroaryl or heterocyclic groups; and (3) R<sub>3</sub> is various groups in Group 1 including alkoxy. As such, the compounds in Groups 1 and 7 possess a common pyrimidine ring system having a common substitution pattern. Applicants believe that searching these additional claims will not pose an additional burden on the Examiner and request joining Groups 1 and 7.

Although it is not believed that any additional fees are needed to consider this submission, the Examiner is hereby authorized to charge our deposit account no. 04-1105 should any fee be deemed necessary.

In view of the above amendment, applicant believes the pending application is in  
condition for allowance.

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Respectfully submitted,

By 

John B. Alexander, Ph.D.

Registration No.: 48,399

EDWARDS ANGELL PALMER & DODGE LLP

P.O. Box 55874

Boston, Massachusetts 02205

(617) 439-4444

Attorneys/Agents For Applicant